

Serial No. 09/913,723
Art Unit No. 2824

AMENDMENTS TO THE SPECIFICATION

Amend the Title of the Invention at page 1, lines 1-2
as follows:

MICROELECTRONIC DEVICE FOR STORING INFORMATION AND
~~METHOD THEREOF~~ WITH SWITCHABLE OHMIC RESISTANCE

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Amend the paragraph found from page 6, line 17 through page 7, line 2 as follows:

In particular, any substance comprising components A_x, B_y, and oxygen O_z, in which substance said component A is a member of Alkaline metals (group IA), or Alkaline Earth metals (group IIA), or Rare Earth elements, or Scandium, or Yttrium, and said component B is a transition metal being member of one of the groups IB to VIII, or a member of one of the groups IIIA, IVA, VA are substances which are able to solve the problem underlying to the present invention, when doped with a dopant of one of or a combination of transition metals, in particular but not exclusively with Chromium, Vanadium, or Manganese, the total dopant amount in atomic percentage being larger than 0% and smaller than 5%, and preferably about 0.2% when (BaSr)TiO₃ is doped with Chromium only. Other preferred amounts of dopants are specific for each dopant element used and substance to be doped.

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Amend the paragraphs found from page 9, lines 14-18 as follows:

One preferred member of that plurality of substances is $\text{Ba}_x\text{Sr}_{1-x}\text{TiO}_3$ with $0 \leq x \leq 0.7$ and having a dopant amount of Chromium in atomic percentage of between 0% and 5%, preferably between 0 and 1%, even more preferably about 0.2%.

Others members of that plurality are materials according to $\text{Ba}_x\text{Sr}_{1-x}\text{TiO}_3$ with $0 \leq x \leq 0.7$ and having a dopant of Vanadium in atomic percentage of between 0% and 5%.

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Amend the paragraph found on page 15, lines 3-7 as follows:

If one analyzes the switching behavior of such capacitor-like structures with varying Cr doping it can be observed that the switching behavior is more pronounced for slightly Cr doped structures, i.e. the best results are obtained with Cr-doping around 0.2% atomic percentage. For these capacitor-like structures the difference between '0' and '1' was the best with adequate reproducibility.

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Amend the paragraph found on page 16, from lines 1-9 as follows:

Fig. 4A to 4C show the operation of a further microelectronic device, a second memory device, that can be used as a multilevel memory device. Since the Fig. 4A to 4C are related to each other, they will be regarded in context to understand the operation of the second memory device. This second memory device for the sake of simplicity is not depicted but is structured as shown in Fig. 1. The second memory device comprising an oxide base electrode 12 made from SrRuO_3 and a region 14 made from SrZrO_3 slightly doped with 0.2% (atomic percentage) Chromium (Cr) for the insulating material and a metallic (Pt/Ti) top electrode 16 on a SrTiO_3 substrate 18 was fabricated with pulsed laser deposition again.

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